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In the Claims

Claims 1-15 are pending in the patent application, because the originally filed claims 16-20 were previously withdrawn. Claims 1, 4, 8-12, and 15 have been amended. Claims 2-3, 5-7, and 13-14 have been cancelled.

1. (currently amended) A method comprising:

plasma curing at least one photoresist layer of a semiconductor wafer to shrinkage resulting from subsequently utilizing an electron beam for critical dimension measurement; and,  
~~— plasma treating a semiconductor wafer having at least one photoresist layer; and;~~  
~~— after plasma treating the semiconductor wafer, measuring one or more critical dimensions on the at least one photoresist layer using an the electron beam;~~  
~~— such that plasma treating the semiconductor wafer prior to measuring the one or more critical dimensions using the electron beam substantially prevents shrinkage of the at least one photoresist layer when using the electron beam.~~

2.-3. (cancelled)

4. (currently amended) The method of claim 1, wherein plasma curing the at least one photoresist layer increases ion dosage of the at least one photoresist layer. plasma treating the semiconductor wafer comprises plasma etching the semiconductor wafer.

5.-7. (cancelled)

8. (currently amended) The method of claim 1, wherein measuring the one or more critical dimensions using the electron beam comprises critical dimension scanning electron microscope (CD-SEM) measurement of the one or more critical dimensions.

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9. (currently amended) The method of claim 1, wherein measuring the one or more critical dimensions using the electron beam comprises after-development inspection (ADI) of the one or more critical dimensions.

10. (currently amended) The method of claim 1, wherein measuring the one or more critical dimensions using the electron beam comprises after-etching inspection (AEI) of the one or more critical dimensions.

11. (currently amended) A method comprising:  
plasma treating curing a semiconductor wafer having at least one photoresist layer; and,  
after plasma treating curing the semiconductor wafer, measuring one or more critical dimensions on the at least one photoresist layer using an electron beam,  
such that plasma treating curing the semiconductor wafer prior to measuring the one or more critical dimensions using the electron beam substantially reducing shrinkage of the at least one photoresist layer when using the electron beam.

12. (currently amended) The method of claim 11, wherein plasma treating curing the semiconductor wafer increases ion dosage of the at least one photoresist layer, increasing resistance of the at least one photoresist layer to shrinkage when using the electron beam.

13.-14. (cancelled)

15. (currently amended) The method of claim 11, wherein measuring the one or more critical dimensions using the electron beam comprises one of: critical dimension scanning electron microscope (CD-SEM) measurement of the one or more critical dimensions; after-development inspection (ADI) of the one or more critical dimensions; and, after-etching inspection (AEI) of the one or more critical dimensions.

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16. (withdrawn) A semiconductor device fabricated at least in part by performing a method comprising:

plasma treating a semiconductor wafer having at least one photoresist layer; and

after plasma treating the semiconductor wafer, measuring one or more critical dimensions on the at least one photoresist layer using an electron beam,  
such that plasma treating the semiconductor wafer prior to measuring the one or more critical dimensions using the electron beam decreases shrinkage of the at least one photoresist layer when using the electron beam.

17. (withdrawn) The device of claim 16, wherein plasma treating the semiconductor wafer increases ion dosage of the at least one photoresist layer, increasing resistance of the at least one photoresist layer to shrinkage when using the electron beam.

18. (withdrawn) The device of claim 16, wherein plasma treating the semiconductor wafer comprises plasma one of curing, plasma etching, and high-density plasma etching the semiconductor wafer.

19. (withdrawn) The device of claim 16, wherein the at least one photoresist layer comprises one of an Argon Fluoride 193 nanometer photoresist layer and a Fluoride 157 nanometer photoresist layer.

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20. (withdrawn) The device of claim 16, wherein measuring the one or more critical dimensions using the electron beam comprises one of: critical dimension scanning electron microscope (CD-SEM) measurement of the one or more critical dimensions; after-development inspection (ADI) of the one or more critical dimensions; and, after-etching inspection (AEI) of the one or more critical dimensions.